AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows.

In the paragraph [0018] on page 6:

A blade portion of a bit body formed using a displacement such as shown in FIGS. 1 and 2, is shown in cross section in FIG. 3. The blade 24 includes thereon a mounting pad 25 having the shape of the displacement (10 in FIG. 1). As previously explained, the radius of the mounting pad 25 is determined by the diameter (D in FIG. 1) of the displacement. Typically, this radius is selected to match the radius of the cutting element mounted thereon. As shown in FIG. 3, a relief groove 26 is formed in the mounting pad 25 by having placed the displacement (10 in FIG. 1) in the mold so that the projection (12 in FIG. 1) was positioned outward and downward with respect to the blade 24. Shown mounted in the pad 25 is a cutting element consisting of a diamond table 20 affixed to a substrate 22. Typically, the substrate 22 is formed from tungsten carbide or similar hard material. The diamond table 20 can be formed in any manner known in the art for making diamond cutting surfaces for fixed cutter drill bits. The cutting element is typically bonded to the blade 24 by brazing the substrate 22 to the blade 24.
In this embodiment, the diamond table 20 extends longitudinally past the surface of the blade 24 by an amount shown at E. The diamond table ~~22~~ 20 has a thickness Z which is selected based on the diameter of the cutting element and the expected use of the particular drill bit, among other factors. In the invention, it has been determined that diamond table breakage is reduced efficiently when the width X of the relief groove 26 is selected so that the groove 26 extends back from the surface of the blade 24 at least about 40 percent of that portion (Z-E) of the thickness Z of the diamond table which does not extend past the edge of the blade 24. Expressed mathematically:

$$X/(Z-E).\geq.0.40$$

In the paragraph [0019] on page 7:

In the example shown in FIG. 3, the diamond table thickness Z is about 0.110 inches (2.8 mm) and an extension E of the outer surface of the diamond table 22 past the edge of the blade 24 is about 0.040 inches (1 mm). The width X of the relief groove ~~25~~ 26 should therefore be greater than or equal to about 0.028 inches (0.7 mm). As previously explained, the width ~~Z~~ X of the relief groove ~~25~~ 26 can be selected by appropriate choice of the width (W in FIG. 1) of the projection (12 in FIG. 1) on the displacement.

In the paragraph [0020] on page 7:

Preferably, the relief groove ~~25~~ 26 has a depth of about 0.025 inches (0.6 mm). As previously explained, this depth can be formed in the bit body at the position of any or all of the mounting pads 24 by forming the displacement (10 in FIG. 2) so that the projection (12 in FIG. 2) extends past the main surface (10A in FIG. ~~2~~ 1) by about 0.025 inches (0.6 mm).